

HOGAN & HARTSON
L.L.P.

MICHELE C. FARQUHAR

DIRECT DIAL
(202) 637-5663

COLUMBIA SQUARE
555 THIRTEENTH STREET, N.W.
WASHINGTON, DC 20004-1109
TEL (202) 637-5600
FAX (202) 637-5910
WWW.HHLAW.COM

December 8, 2004

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 Twelfth Street, S.W.
Washington, D.C. 20554

RECEIVED

DEC - 8 2004

Federal Communications Commission
Office of Secretary

Re: WT Docket No. 03-103
Notice of *Ex Parte* Presentations

Dear Ms. Dortch:

This is to inform you that representatives of AirCell, Inc. ("AirCell") participated in *ex parte* meetings on December 7 and 8, 2004 to discuss issues in the above-referenced air-to-ground ("ATG") proceeding. Specifically, Bill Gordon, AirCell VP for Government Affairs, Paul London, economic consultant to AirCell, and I, counsel to AirCell, participated in meetings with the following individuals:

- Paul Margie, legal advisor to Commissioner Copps (December 7);
- Martin Perry, Don Stockdale, Evan Kwerel and John Williams, Office of Strategic Planning and Policy Analysis (December 8) (David Sieradzki, Hogan & Hartson, also attended this meeting on behalf of AirCell).
- Barry Ohlson, senior legal advisor Commissioner Adelstein (December 8) (David Sieradzki, Hogan & Hartson, also attended this meeting on behalf of AirCell);
- Sheryl Wilkerson, legal advisor to Chairman Powell (December 8); and
- Sam Feder, legal advisor to Commissioner Martin (December 8).

During the meetings, AirCell highlighted the ATG market structure economic analysis recently prepared by Paul London. AirCell also briefly discussed and provided copies of the other documents attached hereto, and referenced AirCell's November 23 filing in the docket that responded to a prior filing by Verizon Airfone.

In addition to the above, electronic copies of the attached documents were also transmitted to the following individuals: Chairman Michael Powell, Commissioners Kathleen Abernathy, Kevin Martin, Michael Copps and Jonathan

HOGAN & HARTSON L.L.P.

Ms. Marlene H. Dortch
December 8, 2004
Page 2

Adelstein; Bryan Tramont, FCC Chief of Staff; and Jennifer Manner, David Furth, Jim Schlichting, Julius Knapp, Richard Arsenault, Ira Keltz, Thomas Derenge, Kathy Harris, Gregory Vadas, Jay Jackson, Ed Thomas, George Sharp, Salomon Satche, Ron Chase, Ahmed Lahjouji, Patrick Forster, Alan Scime, Peter Tenhula and Roger Noel.

Pursuant to Section 1.1206(b)(1) of the Commission's rules, I am filing an original and one copy of this notice in the above-referenced docket. In addition, I am sending one copy of this notice to each of the FCC representatives listed below. Please contact me directly with any additional questions.

Respectfully submitted,



Michele C. Farquhar
Counsel to AirCell, Inc.

Enclosures

cc: Paul Margie
Barry Ohlson
Sheryl Wilkerson
Sam Feder
Bryan Tramont
Martin Perry
Don Stockdale
Evan Kwerel
John Williams

AIR-TO-GROUND MYTHS & REALITIES

COMPETITION & SPECTRUM POLICY ISSUES

Myth: *To ensure maximum use and flexibility of the ATG spectrum, it is necessary to permit the licensee(s) to provide terrestrial-based services, in addition to air-to-ground services.*

Reality:

- **Allowing terrestrial operations on ATG spectrum would skew the auction results.** Located adjacent to cellular spectrum, a nationwide ATG license with terrestrial authority would have enormous value to an incumbent wireless provider, who would have a motivation to bid much more than other entities who intend to make maximum spectrum capacity available to the flying public. As noted by T-Mobile and Sprint, ancillary service could also skew the terrestrial CMRS market. Although Airfone has publicly stated that ancillary terrestrial authority for ATG “wouldn’t be appropriate,” nothing guarantees that it would ignore the additional revenue potential in calculating its maximum bid, if the Commission were nevertheless to make terrestrial authority available.
- **Allowing terrestrial operations would increase the risk of interference to neighboring public safety licensees.** With antennas tilted down to provide service on the ground, interference from ATG out-of-band emissions would be a serious concern. A number of commenters – including Sprint, Cingular, Nextel, Verizon Wireless, CTIA and the American Mobile Telecommunications Association – have opposed such use due to interference concerns, and there is nothing in the record that would alleviate this concern. Space Data alone has proposed terrestrial use of ATG spectrum on a “secondary” basis, yet its proposal – involving no terrestrial base stations – would appear to be suited only to Space Data’s stratospheric platform technology. There is inadequate information in the record to assess the interference potential of Space Data’s proposal, so the grant of any such authority would be premature at this time.
- **Ancillary terrestrial authority is not needed, from either a technical or economic perspective, to make ATG service viable and competitive.** Under the AirCell/Boeing proposal, service to aircraft on the ground (and below altitudes of 200-500 feet) would be provided over non-ATG terrestrial spectrum. ATG is *not* analogous to the mobile satellite service, where the Commission authorized the use of an ancillary terrestrial component (“ATC”) to solve the problem of providing reliable satellite service to “urban canyons” and inside buildings. This technical enhancement was needed to improve the competitiveness of MSS offerings vis-à-vis traditional CMRS and other providers, and was conditioned on a number of significant prerequisites. *See* 47 C.F.R. § 25.149. At a minimum, the FCC would need to develop a record in this proceeding regarding appropriate prerequisites before allowing ancillary service in the ATG band.

- **As WTB Chief John Muleta recently commented, additional flexibility is appropriate only where it would lead to greater competition.** No such justification exists here.

Myth: *Competition in the ATG band won't benefit passengers, because even under the two-license approach there will only be one system available on any given plane.*

Reality:

- **Airlines and passengers will benefit from the interplay between two competitors.** ATG competition will enable airlines to negotiate lower rates and more innovative services for their passengers (as well as for their own use). With competitive pricing, the service cost could be low enough that airlines may decide to provide some services as an amenity (e.g., in-flight WiFi) to passengers at no cost. Thus, there is no justification for abandoning the statutory competition objective simply because the initial purchasing decision will be made by companies rather than individuals. (Under this theory, there would be no need for competition in the market for any telecom services provided to enterprise customers.)
- **With a monopoly provider, it is more likely that some passengers could be left without service if the single ATG provider decided – or was pressured by major airlines – not to serve some market segments (e.g., low-fare airlines, certain routes, or regional competitors).**

Myth: *The airlines are mainly interested in the rapid deployment of broadband ATG; having more than one provider is not a major issue for them.*

Reality:

- AirTran, American, Frontier, JetBlue, Northwest, United and the Air Carrier Association of America are all on record in this proceeding as calling for competition in the ATG band.
- **Unlike current ATG system architecture, the new approach will mean far cheaper equipment, thus allowing for shorter term contracts and making it economically feasible to change providers after the relatively short period of time needed to recoup the equipment investment.** This potential advantage over the old ATG structure will be lost if there is only one provider (who would still be able to use its monopoly status to force airlines into long-term contracts).
- **Airlines understand that passenger ATG demands vary based on the particular route – e.g., cities served, flight length and other variables.** With two providers, an airline could, for example, outfit short haul planes with one service and longer haul planes with the other, in order to obtain the most appropriate pricing structure and/or types of services offered for a given route.

Myth: *Two ATG providers are not needed because satellite service will provide adequate competition.*

Reality: **Satellite service cannot compete effectively on domestic routes because equipment is too heavy and expensive, and per-minute costs**

are too high. Even the newest satellite offerings will be priced at \$2-7/min., with equipment costs ranging from \$500,000 to well over \$1 million. By comparison, ATG broadband could be provided for \$0.50/min. for a voice call, with equipment costing under \$100,000 per plane. No satellite service provider currently serves any domestic routes, nor are there plans to do so. Even satellite service provider Boeing agrees with this assessment.

Myth: *The small, discrete ATG band presents a great opportunity for the Commission to experiment with novel approaches to structuring auctions and developing maximum flexibility service rules.*

Reality: • **ATG is not a new or generic wireless spectrum band, but is the only band specifically designated for the underserved commercial air-to-ground market.** Experimenting with new competitive bidding and spectrum policy approaches is better suited for one of the many general purpose bands where there is no preconceived notion of what service will be offered and no existing market demand. By contrast, if the experiment fails here, millions of underserved and unserved potential customers (*i.e.*, the flying public) would be adversely affected, and some passengers and airlines may never get access to broadband ATG service.

• **The structure of the ATG band can have broader consequences for wireless services on the ground.** Airfone already offers dramatic savings (83% or more) to Verizon Wireless customers for its current narrowband offering; the availability of discounted broadband ATG will make Verizon's service even more attractive relative to other terrestrial carriers, which won't have the option of partnering with an ATG provider if Airfone remains the monopoly ATG provider. This raises the stakes for getting the policy right in this band, and counsels against a sharp departure from precedent. The FCC generally imposes eligibility restrictions and/or license caps to ensure competitive entry opportunities, particularly for CMRS services and most recently for DBS (*see* FCC 04-271).

Myth: *Because it provides the absolute maximum degree of rule and service flexibility possible, the single-provider approach is the only approach consistent with the Commission's current spectrum policy goals.*

Reality: **Flexibility is just one of several spectrum policy goals.** The Commission recently determined that "promoting efficient spectrum use through sharing spectrum is consistent with our overall spectrum policy," and that requiring "spectrum users to share is consistent with the [Spectrum Policy Task Force Report]." (FCC 04-134, ¶ 45 and note 131). Providing exclusive use licenses is not listed among any of the Communication Act's auction objectives of: (1) promoting the deployment of new technologies and services for the benefit of the public; (2) promoting competition by disseminating licenses among a variety of applicants; (3) recovering for the public a portion of the value of the spectrum; and (4) promoting the efficient and intensive use of spectrum. 47 U.S.C. § 309(j)(3).

- Myth:** *Maximum service and rule flexibility is needed in the ATG band in case some superior, future technology becomes available that cannot operate with cross polarization. Besides, the lack of competition resulting from a single-provider approach will not be permanent, as new spectrum suitable for ATG may become available in the future.*
- Reality:** **Starting off with a single broadband ATG provider gives that carrier a “first to market” advantage that is particularly significant in the ATG context, given that it will have time to form important relationships and place many airlines under long-term contracts.** A newcomer arriving years later will be at a distinct disadvantage. The best approach would be to start with two providers. Should one licensee later wish to deploy some as-yet-unconceived technology that is not compatible with overlapping licenses, then that licensee would have the option of acquiring spectrum in the new ATG-suitable band(s).
- Myth:** *The significance of Airfone’s deep-pocketed parent is overrated; ATG can’t be that important to Verizon’s overall strategy.*
- Reality:** **While current narrowband ATG usage may be small, all parties agree that there is tremendous airline and passenger demand for broadband ATG.** The market potential is enormous, with more than 600 million enplanements per year and an annual market revenue that AirCell estimates at over \$500 million. Moreover, ancillary terrestrial service on a nationwide basis would have enormous value to any incumbent wireless provider and Verizon is already offering lower ATG prices for its wireless customers: \$0.69/ min. (or \$0.10/ min with a \$10 monthly fee) for Verizon customers, compared to \$4/min. plus a \$4/call connection fee for non-Verizon customers.

TECHNICAL ISSUES

- Myth:** *The rules needed to enable the AirCell/Boeing proposal would be too complicated and burdensome (even requiring the networks to operate in tandem), thereby increasing the cost of providing the service.*
- Reality:**
- **No tandem operation or common emission control system will be required.**
 - **Like many other services, some minimal coordination will be required, relating principally to the placement of ground stations.** However, for ATG, fewer than 300 total ground stations should be required to provide service across the continental U.S., including airport sites, so the coordination burden will be far less than in any other services. Moreover, if Airfone wins one license, its existing sites should be suitable in most cases, greatly simplifying its coordination obligations.

- **There will be no difference in equipment costs between the single-provider and two-provider approach.** No special base station or aircraft antennas are needed.
- **AirCell agrees that the rules should be flexible.** If default rules are established, the licensees should be able to alter those rules upon mutual consent.

Myth: *True, reliable broadband service cannot be achieved under a two-provider, overlapping license approach.*

Reality: **AirCell, working together with Boeing to develop a joint technical proposal, has demonstrated in multiple technical filings, to the satisfaction of OET technical staff, that the use of cross polarization – a tried and true technique – will permit two licensees to provide full broadband service without harmful interference.** Moreover, AirCell has conducted actual flight tests that support its findings. AirCell is willing to invest millions of dollars to enter the commercial air-ground market based on its confidence in the two licensee plan.

Myth: *The license configuration of the ATG band has no implication on the ability of the licensee(s) to comply with any necessary out-of-band emission limit.*

Reality: **The AirCell/Boeing approach can – and will – satisfy the out-of-band emission (“OOBE”) limitations urged by Nextel, APCO and other parties.** AirCell agrees that there is an important need for such a limit to ensure protection to neighboring public safety and other spectrum users. As Nextel has noted, a two-license approach would actually *diminish* harmful OOBE, and the “AirCell/Boeing approach is unlikely to cause harmful interference to adjacent-band operations.” Conversely, Airfone and Space Data have not indicated in the record that they would be able to satisfy the necessary OOBE limit. As Nextel stated, these proposals “are *extremely likely* to cause harmful interference to adjacent-band licensees.”

Myth: *Deck-to-deck coverage cannot be achieved under a two-provider, overlapping license approach.*

Reality: **Under the AirCell/Boeing proposal, the transceiver unit installed in the aircraft will be dual mode, so that while the plane is on or near the ground (i.e., at the gate, taxi, take off and landing), the unit will communicate on terrestrial frequencies.** This airport-vicinity ground coverage may be provided by existing cellular/PCS carriers, or by use of other terrestrial spectrum. Once above 200-500 feet, the unit will switch seamlessly to the ATG band (much like current terrestrial hand-offs between networks, as occurs in roaming situations). AirCell has demonstrated that this system will experience no difficulties at different airports – even more challenging airports near mountains, such as Denver and Salt Lake City.

The Record Supports Competition in the ATG Band

Commenters supporting **competition** within the ATG band:

Air Carrier Association of America: “Approximately 80 percent of the current U.S. aircraft fleet operates without passenger air-to-ground service. There are a number of problems with Broadband capable satellite systems, including their cost and weight. Unfortunately, we have not seen viable alternatives. In our increasingly competitive industry, it is essential that airlines be able to take advantage of the benefits and consumer choice that come with real competition in the provision of passenger broadband services.”

Frontier Airlines: “[T]here is no doubt that airlines and consumers would best be served by allowing competition between multiple vendors.”

NorthWest Airlines: “Competition will control consumer prices [and] foster the development of new capabilities”

United Airlines: “[T]he Commission should promote competition in broadband air-ground services [T]he Commission can ensure that a competitive marketplace will govern the price of air-ground service”

JetBlue Airways: “Future enhancements to our customer amenities will only be possible if the marketplace is open to vibrant competition. To this end, JetBlue . . . urges the FCC to take all necessary actions to allow multiple broadband providers. Fair competition, as JetBlue has demonstrated in the airline industry, benefits all consumers.”

AirTran Airways: “Competition will . . . encourage rapid implementation of new service offerings by AirTran Airways and others.”

American Airlines: “The number of service providers allowed to operate in the spectrum should be limited only as necessary to ensure that all of the service provider(s) can simultaneously provide broadband connectivity. American Airlines favors a competitive arena”

Sprint: “. . . Sprint views the opportunity to extend voice and data services onboard commercial airlines as an important frontier for commercial telecommunications services. To ensure that providers have reasonable access to their customer base on commercial aircraft, Sprint urges the Commission to pursue a regulatory approach for revamping the ATG service that facilitates competition among multiple service providers. . . . [C]ost and logistical constraints may prevent satellite systems from serving as a viable competitive alternative”

T-Mobile USA: “T-Mobile would like to be able to extend its [HotSpot] service from airports to in-flight commercial aircraft. It recognizes, however, that its ability to offer its

customers this service could be severely limited or even foreclosed unless the Commission licenses multiple competitors in the air-to-ground band. . . . If the Commission were to authorize an exclusive provider in the only band currently allocated for terrestrial air-to-ground service, the result could be a higher-priced, lower quality and less innovative service for consumers.”

Nextel: *“[C]ompetition from multiple operators in the same band will result in lower prices, more choices and higher quality for consumers, thereby advancing the public interest.”*

Senator Conrad Burns: *“The public interest requires that competition in communications services be maximized and that we take all steps to avoid the development of a monopoly that could saddle consumers with the type of high prices and limited innovations we have seen with the existing phone service on our airlines. Accordingly, I urge you to ensure we have competition in air-to-ground services.”*

Société Internationale de Télécommunications Aéronautiques (SITA): *“[T]he public interest would be well served if the manifold benefits of competition could be transferred to the air-to-ground market as a matter of course.”*

Connexion by Boeing: *“Competition will enhance choice without degrading the seat experience. . . . Taking reasonable steps to avoid monopolization is the only course that conforms to the statutory directive to conduct auctions in a manner that ‘promot[es] economic opportunity and competition.’”*

Robert Crandall (past president, chairman & CEO of American Airlines and current member, FAA Management Advisory Council): *“Competition will provide airlines a choice among providers and services, will accelerate the development and deployment of new capabilities, and will lower the cost of services for consumers.”*

Commenters supporting an **exclusive license** approach:

Verizon Airfone: *“In order to build on its existing network and upgrade it in a way that will accommodate broadband, the Commission’s rules must be modified to facilitate Verizon Airfone’s ‘exclusive use’ of a sufficient amount of spectrum to support broadband services. As Verizon Airfone indicated in its comments, it will require access to all or most of the 800 MHz air-ground band”*

**SUMMARY OF COMMENTERS' POSITIONS
IN THE ATG DOCKET**

<i>SUPPORTS COMPETITION IN THE ATG BAND</i>	<i>SUPPORTS SINGLE BROADBAND ATG LICENSE</i>
<ol style="list-style-type: none">1. Air Carrier Association of America2. AirCell3. AirTran Airways4. American Airlines5. Senator Conrad Burns6. Connexion by Boeing7. Robert Crandall8. Frontier Airlines9. JetBlue Airways10. Nextel11. NorthWest Airlines12. Société Internationale de Télécommunications Aéronautiques (SITA)13. Sprint14. T-Mobile USA15. United Airlines	<ol style="list-style-type: none">1. Verizon Airfone

Commenters Oppose Terrestrial Use of the ATG Band

Commenters **opposing** terrestrial use of the ATG band:

American Mobile Telecommunications Association: *"[T]here should be no changes in the technical parameters of this [ATG] service, including adding a terrestrial component, unless and until it can be determined conclusively that the modification would have no interference potential for 800 MHz users."*

CTIA – The Wireless Association™: *"After several years of analysis and debate regarding interference to [the 800 MHz] band of spectrum, prudent policymaking dictates that the Commission act with caution, particularly with regard to the creation of a new terrestrial service in this band. . . . [T]he possibility for adjacent band interference exists, particularly with regard to operations close to the ground. Adding the additional uncertainty of an ancillary terrestrial service will magnify those concerns, particularly due to the lack of a record on the subject of terrestrial operations in the band."*

Cingular Wireless: *"[T]here are serious interference concerns arising from concurrent terrestrial and airborne use of the same spectrum In the absence of extensive test data showing that terrestrial use of air-ground frequencies will not diminish the reliability of air-ground service, the Commission clearly should not authorize the provision of terrestrial service on air-ground frequencies and thereby jeopardize its availability for public safety needs."*

Sprint: *"Sprint opposes [ancillary terrestrial service] as unsupported by the record in this proceeding. The mixture of ATC and ATG service implicates interference and other issues not adequately addressed by the docket and submissions made."*

T-Mobile: *"[T]his is the only band currently allocated to terrestrial air-to-ground service. As such, the Commission should ensure that the licensee(s)' predominant use of this spectrum is for the provision of air-to-ground service. Because this band is located immediately adjacent to CMRS spectrum, there is a significant risk that the licensee would decide to abandon the ATG market and instead the deploy the spectrum to offer terrestrial CMRS services only."*

Verizon Wireless: *"Verizon Wireless agrees that allowing terrestrial operations to occur in the air-ground spectrum would present significant interference issues. . . . Because there are relatively few air-ground base stations needed for air-ground service, B band cellular providers can avoid interference issues by careful cell placement and special filters. However, should terrestrial service be allowed on the air-ground spectrum, licensees of that spectrum will need to put in more base stations thereby increasing the potential for interference with cellular B band carrier operations."*

Commenters **supporting** terrestrial use of the ATG band:

Space Data: *“Handsets also could be programmed to use these [ATG] frequencies as a last resort if the handset failed to receive other cellular frequencies. This approach would limit the terrestrial use of the air-ground frequencies to areas in the United States that currently have little or no wireless coverage. The amount of terrestrial traffic using the air-ground frequencies would be low and unlikely to interfere with air-ground wireless traffic. . . . Stratospheric technologies, like that employed by Space Data, are perfectly suited to deliver these services”*

SUMMARY OF COMMENTERS’ POSITIONS

<i>OPPOSE TERRESTRIAL USE</i>	<i>SUPPORT TERRESTRIAL USE</i>
<ol style="list-style-type: none">1. AirCell2. American Mobile Telecommunications Association, Inc.3. Connexion by Boeing4. Cingular Wireless5. CTIA6. Nextel7. Sprint8. Verizon Wireless	<ol style="list-style-type: none">1. Space Data